

An Essay

on

Uterine Hemorrhage.

By Harper

passed March 31, 1877.

1899

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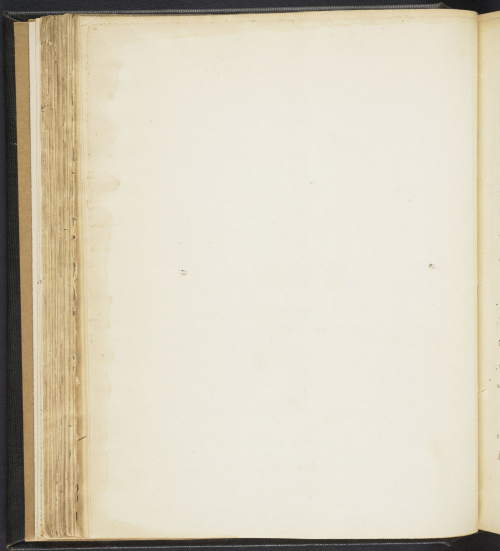
Jan. 1880

2. Long Street, N. York

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Do
Barra Taylor M. D.

of Duery Stones County Maryland.

For

I could not with justice to my feelings, close my medical education which has been prosecuted under your care, without inscribing this, the first fruits of it, to you, as an acknowledgement, not only for the course which you have conducted my studies, but also for the numerous marks of friendship received from you.

Had I only received from you the ordinary attention of a preceptor or to a pupil, I should have been silent; but considering the numerous obligations you have conferred on me, I should be ungrateful, were I to omit this opportunity of declaring to you my gratitude for the solicitude you have evinced for my advancement in medical knowledge; and also of my high respect for your abilities as a Physician.

Receive then this, this, as a sincere testimony of my high respect, esteem and affection; and be assured, that the recollection of the many favours I have received from you, will always be ardently retained by,

Your Obligated friend, and pupil

The Author.

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Gentle Rain, N. B.

I have been thinking of you

I have been thinking of you
and wondering how you are getting on
in the world. I hope you are
well and happy. I have been
very busy lately, but I have
managed to find some time to
write to you.

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An Essay &c.

There is no subject which demands the attention of the practitioner of medicine more promptly, and which requires more vigorous exertions in behalf of his patient than uterine hemorrhage. Subjected to its attacks ~~are~~ only the fairer part of creation, whose constitutions are naturally delicate, and unable to sustain strong impressions of any kind, compared with that of the robust male. But it is even the more delicate of these who are most liable to attacks of uterine hemorrhage. What ravages must a profuse loss of blood make in such a constitution? Unless the discharge is speedily arrested, death must soon terminate the patient's career.

Hemorrhages from the uterus occur both in the impregnated and in the unimpregnated state of that organ. It is the former kind only which is ~~here~~ considered in this place, or those which are consequent on pregnancy. I shall arrange all the hemorrhages from the uterus under two heads. 1. Those which precede the expulsion of the fetus, and 2. Those which succeed to delivery.

John C. May

Dear Sir, I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the purchase of a lot of land in the town of New York, and in reply to inform you that the same has been referred to the proper authorities for their consideration. I am, Sir, very respectfully,
Yours, &c.

✓

Chapter 4.

Of Hemorrhage which precedes the expulsion of the Fetus.

This we shall again divide into two kinds. 1st The Accidental or where the placenta is attached to the fundus or parietis of the uterus, and 2nd The Unavoidable or where the placenta is attached to the cervix, or over the os uteri. These two divisions I have adopted from Rigby.

Section 1. Of Accidental Hemorrhage.

The whole inner surface of the placenta being attached to the uterus by means of a great number of tender vessels, and the membranes being in close contact with, and adhering to the inner surface of the uterus, it follows necessarily that whenever a portion of either of these, is detached hemorrhage must ensue, in consequence of the rupture of the connecting vessels, and this hemorrhage will be proportionate to the number and size of the bleeding vessels, and to the activity of the circulation.

Hemorrhage may take place at any period after conception, even before the ovum reaches the uterus. In such cases, it is owing to an imperfect ^{action} of the uterus in forming the deciduous membrane. This being thrown off, the delicate ovum has no means of attachment to the uterus and is consequently expelled as soon as it leaves the fallopian tube. After the ovum becomes attached and somewhat increased in bulk, the uterus is distended, and pains precede the expulsion, which before this were unnecessary to effect it. -

Towards the third ^{or fourth} month of pregnancy, the uterus having increased very considerably in size, the contractions become greater, the pains are very considerable, and the uterine vessels having proportionally enlarged, the discharge is much more profuse, and is often attended with sickness and vomiting, but even here the hemorrhage is very seldom alarming; if the flooding is great abortion soon takes place, and puts a stop to it.

When the causes producing a separation of the placenta act slowly and in the beginning of pregnancy, the patient complains of shivering, and colic, followed by pain in the bowels and uterus, some blood is next discharged, which is connected with heat and constriction of the surface, head ache, thirst, increased activity of the pulse, and often sympathetic affections of the stomach and lungs; but if the causes operate suddenly, or in the advanced stages of pregnancy, the progress of the disease is more rapid, and the discharge appears without any previous affection; and neither the general system nor particular organs indicate it, until the discharge has appeared.

The flooding which precedes miscarriage in the early part of pregnancy is very troublesome, but cannot be compared to those dreadful hemorrhages which occur after the sixth month, the vessels are then so large that a separation of even a very small portion of the placenta must be attended with a very profuse discharge of blood.

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Of the causes of Accidental Hemorrhage.

The membranes and the uterus being connected to each other by a very tender vascular substance, it follows, that anything which increases the determination of blood to these vessels, or increases their action must endanger a separation. The operation of such a cause can be discovered in most cases, of hemorrhage.

The natural dilatation of the mouth of the uterus in the commencement of labour, always detaches a small portion of the membranes, and is consequently followed by a discharge of a small quantity of blood which is generally called the shows, but is so trifling in quantity that it is not entitled to notice. It is only those causes producing hemorrhages which require the assistance of the physician which I am to notice in this essay.

The Causes of Uterine Hemorrhage, are:

I. Plethora. Pregnant women are particularly subject to plethora, as is evinced by the blood drawn from them at this time, which almost always ^{is} the inflammatory crust. Much stimuli of any kind acting on a system thus predisposed, it will readily be supposed will of the cause a rupture of the vessels which constitutes the bond of union, of the placenta & membranes with the uterus. That species of hemorrhage of which we are now speaking, is almost always attended with increased action of the vascular system. The parts on which a plethoric habit acts most readily according to Brown (to whose valuable work, I am greatly indebted

throughout this essay are, first, the part to which the placenta is attached, for there the vessels are largest and most numerous, and second, the cervix and os uteri, because there the greatest changes are going forward, at one of these places rupture is most likely to take place.

Plithora most commonly occurs in the young and vigorous, especially those who are newly married, and of a salacious disposition. In such persons a separation from the husband is absolutely necessary. Sometimes the hemorrhage is preceded by vicarious discharges of blood from other parts, as the nose, lungs, &c. In such cases bloodletting is of immense importance.

Plithora may arise either from an increased activity of the uterine vessels, or from a fulness of them. It may also be either general, or confined to the vessels of the uterus. In the latter case, the patient feels a sense of weight and fulness about the lower part of the back and abdomen, with slight darting pains before the attack. Women who are disposed to plithora should carefully avoid the luxuries of the table, highly seasoned food, spices and all other stimulating substances are highly injurious. They should not sleep on feather beds especially in summer. Strict attention must be paid to the state of the alimentary canal, and costiveness carefully obviated, by gentle laxatives, or by enemata. Nothing conduces more towards producing and keeping up a state of plithora than constipation of the bowels.

II. When the correspondence between the growth of the membranes ^{and of the uterus} is not exact, a separation must necessarily take place, & flooding ensue.

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III.^d Spasmodic actions of the uterine fibres, particularly about its orifice and neck, must produce a detachment of the membranes and consequently hemorrhage. The discharge from this cause we should suppose would always be attended with pain, or be preceded by it; but this we find is not constantly the case, nor we find pain, nor uneasiness about the back and abdomen often attend flooding from other causes. We know that motion may take place in the uterine fibres without much sensation, as in the dilatation previous to delivery, in natural labour, which is often entirely unattended with pain. When these spasms occur, opiates, with the warm bath will be found very serviceable in relieving them. A syringe injection into the rectum may also be used with great advantage.

IV.^e Whether stops prematurely the action of gestation may be a cause of flooding. If the expulsive contractions are speedy and effective, the discharge is very slight, and unattended with unpleasant symptoms; but if the action of the uterus is partial, irregular and tardy, the discharge may be very considerable. Sometimes this partial contraction will produce a sufficient detachment to occasion a very considerable hemorrhage, which will continue until coagula are formed, a syncope induced, (which by retarding the flow of blood always favours the formation of coagula) which stops the hemorrhage for a while, but when the strength of the patient returns, these will be forced away, & the hemorrhage again recur. This goes on until the patient is exhausted, and sinks under it, unless speedily attended to. In such cases the Decale Cornutum has been highly recommended by

8. Some women have a particular predisposition to hemorrhage, those occurring from the slightest causes. This is more especially the case with women who are of a lax habit of body, and subject to hysterical and other nervous affections. In such all the causes which induce hemorrhage are to be most scrupulously avoided, as when once excited they are very apt to be alarming. —

D-Persalt of Potash. It very speedily excites uterine contractions and causes the expulsion of its contents.

V. External violence. Falls or blows are the manner in which this is most commonly received. It causes hemorrhage either by exciting immediately the contractions of the uterus, or by causing too great a determination of blood to that organ. It is sometimes surprising to observe to what a degree violence can be applied with impunity, but notwithstanding this, these causes are to be studiously avoided during gestation.

VI. Great exertions, so as to induce fatigue. This may be done in a great many different ways, as long walks, this is particularly apt to bring on hemorrhage; dancing, riding on horseback, or in a carriage over rough roads &c.

VII. The Passions of the mind, as Fear, Joy, anger, or in short, any thing which causes great mental agitation often brings on hemorrhage from the uterus.

The foregoing are the most common causes of uterine hemorrhage. There are a number of others which occasionally give rise to it. Among these may be reckoned, the violent action of medicines, low diseases, and in short all the causes which produce abortion.

Of the Treatment of Accidental Hemorrhage.

If hemorrhage from the uterus take place in the early months of pregnancy, it may in general be easily stopped by diminishing the action of the uterine vessels, and promoting the formation of coagula. For the former purpose bloodletting, and the antiphlogistic regimen, is to be resorted to. The

Lowels are to be kept in a soluble state. A soft plug in the vagina will answer the latter indication exceedingly well. But the vessels which constitute the bond of union between the ovum and the uterus being at this time small, if the hemorrhage is profuse, there must be so large a portion of them ruptured, that those which remain, will be insufficient to nourish the fetus, which will die, and consequently be expelled. In these cases particular attention must be paid to the general system, we must enjoin rest, a horizontal posture, and apply cold; at the same time carefully avoiding warmth, heating drinks, and stimulating articles of food; at the same time using the plug. By these measures the discharge will often be stopped, but if it is not, the effusion into the vagina, being kept there by the plug, will so distend and overcome the resistance of the soft parts, that the ovum when fully detached, can easily be expelled by the action of the uterus.

When the farther pregnancy is advanced the more alarming does hemorrhage become. After the sixth month the slightest discharge of blood from this organ, must be immediately attended to, and the patient watched with all possible care, to prevent an increase. The vessels ^{of the uterine} are at this time prodigiously enlarged, and even the slightest rupture of them produces an alarming discharge of blood, but should the separation be still more considerable, every effort of the practitioner is required to put a stop to it, and unless this is speedily done the patient must inevitably sink under it. If the

hemorrhage occurs after the seventh month, the state of the ~~or~~ uteri must be ascertained. By introducing a finger into the vagina, we must discover whether or not the placenta presents. We are not to conclude too hastily that this is the case, for large clots of blood about the cervix, or os uteri may be easily mistaken for this viscous. If it be found that the placenta does not present, and the loss of blood has not been so great, as to endanger the life of the patient, the plug should be introduced, cold applications used, and the antiphlogistic regimen carefully enforced. Bloodletting is here seldom admissible; the pulse is small weak and quick, and is very often attended with great gastric irritability, nausea, and ~~in~~ state, approaching to syncope; this state of the system is very favourable to the formation of coagula, & very often the hemorrhage will cease. Advantage should be taken of this state of the system to prevent its recurrence, The eye of the practitioner should never be for a moment, off his patient until she is free from the danger of a relapse. This cessation should only be viewed as a deceitful calm, for as soon as the patient has a little recovered her strength, the hemorrhage will often recur with renovated violence.

If, notwithstanding all our efforts the hemorrhage goes so far as to endanger the life of the patient, delivery must be performed, as the last resource. This is seldom necessary, however before the parts are sufficiently relaxed to admit of its being performed with facility. -

When the discharge continues violent, the pulse becomes small, quick and irregular, the stomach is disordered, and irritable, often sick; and if the hemorrhage is not checked by delivering the patient, the energy of the circulation is diminished, the muscles contract feebly, the surface becomes cold and clammy, the face pale, the breathing is imperfect, with sighing, attended with repeated faintings, and finally convulsions close the scene.

I shall next very briefly consider each of the remedies used in uterine hemorrhage. The first of these which is to be attended to is Rest. As soon as the patient is attacked, she should be placed in a horizontal posture, and a state of absolute rest enjoined. Every part of the antiphlogistic treatment must be strictly attended to. The patient is to be restricted to a low diet unless the discharge of blood has been so great as to produce great debility, the diet in these cases should be generous.

Cold applications, are at the same time to be employed. Cloths dipped in ice-cold water may be applied to the abdomen, ~~and~~ pubes, back, and extremities. The room in which the patient is placed, if possible, should be spacious, freely ventilated and the temperature kept low. By these simple means, the discharge when moderate, and in the commencement of pregnancy may often be stopped. We are however to be cautious not to carry the use of cold too far, so as to diminish the temperature much below its natural standard; or when debility has supervened great circumspection is ~~indispensable~~ necessary in the employment of cold; the system might be

reduced so low, that reaction could not take place, and the patient would sink. It is even necessary in some instances to apply moderate warmth; this is more especially the case, when the discharge has been profuse, or long continued, and we find the patient sinking; but care must be taken here not to run into the opposite extreme, and apply too much heat.

The next remedy of which I am to speak, is Bloodletting. When the patient is of a plethoric habit, with a strong full pulse, especially if the patient is young, and the hemorrhage moderate, bloodletting will be of the greatest service. The Lancet must never be employed so far as to induce debility, but we are at the same time to recollect, that the detachment of the vessels which produces the discharge, is produced by increased action, or by great fulness of the uterine vessels, and therefore that blood detached from the general system, will diminish the flooding, not only by lessening the size of the vessels, and moderating their action, but will also take off the determination of blood to the uterus, and thus prevent a further laceration of the vessels, and consequent increase of the hemorrhage.

Plugging the vagina is a very important part of the treatment of uterine hemorrhage. A soft handkerchief, or something of the kind, is to be employed for this purpose; first dip it in oil, and wring it out, then gradually introduce it, one portion after another, with the finger into the vagina. Sometimes a little powdered ice may be pushed up before or a piece of ice folded in

the cloth will greatly increase its efficacy. Be careful however not to continue the application of the cold long enough to injure the tone of the parts.

Whatever promotes the formation of coagula, has a tendency to check haemorrhage for this purpose nothing is more serviceable than the plug; if the discharge is not very great, it will often stop immediately after the introduction of the plug but the patient will be by no means safe for some time after. These coagula becoming detached, the hemorrhage will again recur, and if care is not taken to prevent it, the flooding may be repeated in this manner until the strength of the patient is exhausted. On the first appearance of the discharge, when the os uteri, and the external soft parts, are firm, and unyielding, nothing is more advantageous than the plug, but when the hemorrhage has been profuse or frequently repeated, and the circumstances of the patient demand more active practice, and prompt delivery, then the plug cannot be proper; if insisted to, it may be attended with fatal and deceitful effects. We can indeed restrain the hemorrhage from appearing outwardly, but there have been instances, and these instances ought to be constantly remembered, in which the blood has collected within the uterus, which having lost all power, has become relaxed, and slowly enlarged with coagula; the strength has decreased - the bowels become inflated - the belly swelled beyond its size in the ninth month although the patient may not have been near that period, and in these circumstances, whilst an inattentive practitioner has perhaps concluded that all

± Burns. The application of the other two ways to improve the line of

Book 10

University of California, Berkeley

See Jones's *Praxis* vol. 2. p. 257. and St. Chapman's *Midw. Lectures on Maternal Medicine*.

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was well, with regard to the hemorrhage, the patient has expired, a lived only long enough to permit the child to be extricated^d. This shows the necessity of having our eyes continually on the patient.

The Digitalis is very strongly recommended in uterine hemorrhage by Arnott. In cases where the vascular action is considerable, it would undoubtedly be sometimes beneficial, by virtue of its sedative power, but it requires a great deal of discrimination in its use. If the system is in a state approaching debility, or if debility has already supervened, the digitalis will aggravate instead of relieving the hemorrhage; it is moreover very uncertain in its operation even very small doses sometimes producing violent effects. Upon the whole, I think the digitalis should seldom be employed in uterine hemorrhage, especially as we have other articles more certainly, and more decidedly efficacious.

Nauseating doses of emetics, have been highly recommended in uterine hemorrhage. Cullen says "it has been found, and I myself, in some instances have found, that nauseating doses of emetics have been of service in several instances of uterine hemorrhage^e." The article generally employed is the Hecacuantha. Dr Chapman prefers it to every other remedy, in this disease, his mode of using it is in combination with opium, two grains of the former, to half a grain of the latter to be repeated every two hours. When given in this manner he has known the discharge almost instantaneously cease^f. The efficacy of the Hecacuantha is very greatly increased, by combining opium with it - a constant nausea is to be kept

"Hypodermic & Mat. Med."

up. but care is to be taken not to induce vomiting, as this will for a time increase the discharge. Dr Dorey remarks that when thus employed, its operation appears almost specific.

The Acetate of Lead, or Saccharum Saturni has acquired a greater character for checking hemorrhage from the uterus than any other article. To the late Professor ^{Wray} ~~Barton~~ is indebted for having dissipated the idle fears of practitioners in using this medicine and for introducing it to the place it now holds in our list of remedies. "In many cases of bleeding," says he "particularly from the nose, uterus, intestines, and lungs, I have exhibited the acetate of lead, generally in combination with a pittance of opium, and sometimes with a portion of Mease's nuxia. I seldom have been disappointed in my expectations of benefit from the medicine, which of all the articles of the materia Medica seems to me to possess the greatest command over the movements of the arterial system. In no instance have I perceived any dangerous, and rarely any temporary inconvenience from the employment of lead. I do not doubt indeed that it is an article capable of essentially endangering the system, and even destroying life: and accordingly would not advise the young practitioner to continue the internal employment of lead, for more than a few days in succession, and it is fortunate that in a great majority of cases, it is not necessary to persist in its use for any considerable length of time: for it almost always shows its good effects very soon.

"In regard to the dose of the saccharum saturni," continues he, "this must affect

"Baker's Cullen vol. 2. p. 21. and also the same year the ...

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-tally depend upon the violence of the hemorrhage. In alarming bleedings I have often given it to the extent of two or three grains, twice or thrice added up. In one case (of epistaxis) he ventured immediately on a dose of eight grains without any bad effects. Dr. Chapman mentions a case in which he gave a drachm of the sugar of lead in twenty four hours without any unpleasant consequences. He supposes that one reason, why it often fails, is because it is ~~because it is~~ given in too minute doses, and asks, what would be the effects of ten grains or a scruple at a dose? He also relates a case in which a woman took by mistake, two drachms of the acetate of lead with no other effects than a profuse purging.

If the vascular action is great it must be reduced by venesection, previous to the use of any internal remedy, for they can have but little, or no effect, while the system is highly excited; it is by moderating the local action of the uterine vessels that the lead is useful. Dr. Doisy prefers a combination of the lead with belladonna and ipecacuanha in the following proportions:

Rx. Saccharum Saturni, three grains

Opium, & Ipecacuanha, each one grain. M. This is to be taken every one or two hours, or as often as the emergency of the case requires. He says when thus used he knows of nothing so efficacious in uterine hemorrhage.

Dr. De Wee, says he has, in some cases found, "where opium had disagreed, joining a grain of powdered Capsicum [to the acetate of lead] has been useful; this however is only to be used where the system is prostrated, from the long continuance, or excess

+ No 6 p. 275 of Dover, B and L. 1800.

of the discharge." "I have also met with some cases" says he "where the sugar of lead has produced no effect when given by the mouth, and where it has produced an almost instantaneous one, when \mathfrak{zj} of a gill of cold water, with \mathfrak{zj} of Tinct. Thebain has been given as an enema."

Astringent injections into the uterus will very often be serviceable. DOwson says he has frequently succeeded in checking considerable discharges in the early months of pregnancy, by having a strong solution of saccharum chaberni thrown up the vagina. Care should be taken in using them not to force away any coagula which may have formed over the orifices of the ruptured vessels, as the discharge would thereby be increased. In general, however these injections are decidedly inferior in efficacy to the plug.

Having now very briefly considered each of the articles employed in uterine hemorrhage I shall next make a few general observations, on the manner in which they are to be used. Called to a patient who has a discharge of blood from the uterus, We are to have her immediately placed in a horizontal posture, and enjoy absolute rest, the temperature of the room is to be moderated, and cold applications made to the pubes, and other parts of the body. The plug is also to be introduced into the vagina. If the pulse is full, hard and strong, and the countenance suffused, bloodletting must be had recourse to immediately. We are to bear in mind, that the hemorrhage arises from, and is kept up principally by an increased activity of the uterine vessels, and that whatever diminishes this

action must moderate the flow of blood from them. To meet this indication nothing can be compared to venesection. It may be said that if left to nature the discharge itself will relieve the system; but we know that the operations of nature when once interrupted, are irregular, and uncertain, and can by no means be trusted to; if relied on, the hemorrhage will go on, and exhaust the patient.

After the arterial action has been reduced, the opiacum and opium, or the preparations of the acetate of Lead, are to be given. If the latter is preferred it must be used freely, the dose must be graduated to the violence of the hemorrhage. If the flooding is serious the dose must be large. This is not a case in which we can cautiously test the efficacy of remedies, by exhibiting it in small doses. Indolence, or timidity, is fatal to the patient. A disease so alarming, so violent, and so quick in its progress, as a profuse hemorrhage from the uterus, can never be trifled with; and while the practitioner is deliberating with himself and hesitating how to proceed, he will have the mortification to see his patient expire. It is only by the efficacious, and energetic employment of the most powerful resources of our art, that we can ever expect to be successful in such a case as the one before us.

Should the hemorrhage continue so long as to induce great debility, the treatment must be changed; gentle warmth must be applied to the surface of the body, particularly to the extremities. Small quantities of cordials, and a generous diet may also be allowed, together with moderate doses of opium. But sometimes

1. Bona

The exhalation will be so great as to require much stronger stimuli, as wine, and even undiluted brandy freely given, together with the free use of opium. Attention must also be paid to the condition of the alimentary canal. Constipation must be guarded against ~~by~~ the use of gentle laxatives, and emetics ^{indicated} that these can only be used before debility has supervened.

By properly attending to the discharge, and adopting our remedies to the state of the system, we can very often put a stop to the hemorrhage, and enable the woman to go on to the full period of utero-gestation. But if they all fail, and the flooding is alarming, the membranes must be ruptured. If the os uteri is sufficiently dilated this may be done with the finger, but if it is not, they must be perforated by a probe introduced through the os uteri. This will generally produce strong contractions of the uterus, by which the hemorrhage will be suspended, and the fetus expelled. The woman however is now to be considered as out of danger until she is delivered. Should the hemorrhage recur we must perform delivery as the dernier resort.

Before the sixth month of pregnancy, it would be extremely difficult to have recourse to manual assistance, as the parts are so firm and unyielding, that the hand could not be introduced without violence to them. But fortunately this is unnecessary, for a laceration of the vessels which connect the placenta to the uterus, capable of producing a hemorrhage which would endanger the life of the patient; would not leave a sufficiency of vessels to nourish the fetus, and so on.

motions being now very slight, it will readily be expelled by the uterine action. Manual assistance is entirely unnecessary, except in some cases, according to Dr. Denman where the ovum will be found by examination to have half escaped from the uterus, which has not power to complete the expulsion. In such a case, by moving it with the finger, from one side to the other, it will be detached and fall into the vagina. Violence is not to be employed; the intention is more to solicit the contractions of the uterus, than forcibly to detach the ovum. All we have to do in the floodings which occur in the early months of pregnancy, when we find that abortion cannot be prevented, and if the parts are rigid is, to use sleeping until they are dilated sufficiently to permit the contents of the uterus to escape with ease, and without further assistance.

After this period the difficulty is not generally so great, and the hand will be admitted without much trouble. Sometimes however the os uteri will be found firm and rigid, force must never be used in such cases to introduce the hand. But if the patient appears to be sinking we are not always to wait until the os uteri is dilated, as we might wait for the opening of the uterus, till it was too late to relieve the patient by turning the child; and for this reason it seems right, that we should sometimes be as much influenced by the os uteri being in a state capable of dilatation without violence, as by its being really open; when this is the case therefore, if the woman's situation demand speedy assistance, we should not hesitate to attempt delivery, even though to the touch

* Right or Uterine Hemorrhage p. 20.

the uterus seems quite shut, more especially, in making the attempt, we shall know before we can possibly have injured the uterus, whether it be safe to proceed - if the wound readily give way, and the hand pass with ease, we may be certain no harm will follow, and may on that account confidently prosecute the turning; but if on the contrary there immediately come on a contraction of the uterus, that, in a purse like manner, tightly surrounds the fingers, it will prove difficult, and we ought therefore to desist, and wait till the part be more relaxed by pain, or discharge, as difficult, in these circumstances, is the truest criterion of danger.* When the uterus is in such a state as to admit of the introduction of the hands, we are to pass it up and seize the feet of the child which are to be brought down, and the child extracted. The child is not to be brought away too precipitately. if it is brought along very speedily, the uterus will not have sufficient time to adapt itself to it, and of ten will not contract. after the delivery is accomplished, in consequence of which the hemorrhage will continue with increased violence. But if the delivery is performed slowly, it allows the uterus time to contract, which obliterates the mouths of the bleeding vessels and stops the discharge of blood.

Sometimes hemorrhage occurs after the child's head has passed through the superior strait into the cavity of the pelvis. Should we be called to a patient, in whom the process of labour had proceeded thus far, who was flooding copiously, and the pains were inefficient to expel the child, it would be im-

possible to push up the head and turn the child, therefore we shall be obliged to have recourse to the forceps, if the head is sufficiently low. Generally it is not difficult to apply them in this situation, and the head may be easily brought down and delivered. ~~But the forceps cannot be applied to the head, as it is not sufficiently low, and the child is not sufficiently turned. The same con-~~
~~ditions relative to the hasty extraction of the child, are to be observed in this case,~~
 as in the one already mentioned. Sometimes the hemorrhage will continue after delivery, those cases I shall treat of in another place.

Seet. 2^d. Of Unavoidable Hemorrhage.

By an unavoidable hemorrhage from the uterus, I mean a discharge of blood from that organ, in consequence of the ^{attachment of the} placenta to the cervix, or os uteri. A majority of the cases of uterine hemorrhage which occur towards the latter end of pregnancy arise from this cause. Arnott says that at least two-thirds of those which have fallen under his notice have arisen from this cause, and others have concurred in this statement.

If the placenta is fixed to the cervix, or os uteri, no inconvenience will result from it until about the end of the seventh month. When these parts begin to dilate preparatory to delivery, a rupture of the vessels which connect the placenta to them must necessarily take place, and consequently hemorrhage ensues. Called to a patient after this time who has a considerable discharge.

I have been thinking of you very much lately, and
 wondering how you are getting on. I hope you are
 well and happy. I have been very busy lately, but
 I have managed to find some time to write to you.
 I have been thinking of you very much lately, and
 wondering how you are getting on. I hope you are
 well and happy. I have been very busy lately, but
 I have managed to find some time to write to you.

of blood from the uterus, we should immediately ascertain the state of the os uteri; for this purpose the finger is to be introduced, and a careful examination made; if the placenta presents and is the cause of the flooding, it can be distinguished by its soft spongy feel, the under part of the uterus at the same time has a thicker feel than usual. By this means we can readily distinguish it from the membranes; but there is a circumstance which is well calculated to deceive the inexperienced practitioner, large clots of blood often form about the os uteri during hemorrhage which are exceedingly difficult to distinguish from the placenta. Care must be taken not to fall into this error as it would cause the patient to be delivered sometimes unnecessarily and imperfectly.

Any part of the placenta may be situated over the os uteri, either the centre, or one of its edges; if it be the latter, the adhesion on one side may be entirely separated, and thus leave a very considerable bleeding surface.

Having ascertained that the placenta presents, we know that the hemorrhage must necessarily continue until the size of the uterus is diminished by taking away its contents; and that as the dilatation increases more vessels will be separated, the hemorrhage will increase; and long before the natural period of labour, the loss of blood will destroy the patient. Under these circumstances our only resort is to delivery. At the commencement when the ^{os uteri is} not yet pro-
fused, the soft parts will be found hard and unyielding, and the hand cannot be introduced without violence to the patient; but in this state of things

there is no necessity for hurrying the delivery. By introducing a plug into the vagina, and preventing the escape of the blood, before the discharge becomes sufficient to endanger the life of the patient, the relaxation of the parts will be so great, as to admit the hand to pass on without difficulty. Should the os uteri be found firm, and to contact round the fingers with considerable force, the hand is not to be passed on forcibly, but one may rest assured that the powers of life are still very considerable, and that the life of the patient is not yet in great danger. When we find that the fingers can be introduced into the uterus, they are to be carried between one side of this organ, and the placenta, separating them from each other, or they must be thrust through the substance of the placenta. Destroying the connection between them is less respectful to passing the hand through its substance, because this is thicker when placed over the os uteri than in any other situation, and it takes more time to execute it. The detached parts will continually interrupt us, and impede the progress of delivery; the child also, according to St. Dismann, is much more liable to be destroyed in consequence of the circulation in the cord being stopped by pressure.

The separation of the uterus and placenta will always increase the hemorrhage very considerably for a time, but it will be stopped as soon as the child is brought ^{on} for the body will act as a plug and put an end to it.

The placenta being partially detached in this manner: I have described, the hand is to be passed on, into the uterus, and the child turned and delivered.

+ See a case in N.Y. Med. Refr: Vol. 11, p. 342, by St. Darlington.

-ced by ^{the} feet. The placenta is afterwards readily brought away, the w-
-time contracts, and the hemorrhage ceased. The delivery is not to be hurried
but time must be allowed for the uterus to contract as the child is brought away
for the reasons already explained in another place.

Potition sometimes goes on nearly to the full period, with the placen-
-ta attached to the cervix, or os uteri, especially when the adhering surfaces are
strongly connected, before hemorrhage supervenes, and it has been even stopped
for a considerable time when it has once appeared. But when it has been ascer-
-tained that the placenta presents, the patient should not be subjected to
to the hazard of another profuse attack, merely to gain a short respite from delir-
-ium, especially as we know, that it must be eventually resorted to; and that the
woman is never safe until the possibility of further hemorrhage is precluded
by separating the size of the uterine vessels, which can only be accomplished by
taking away its contents, and suffering it to contract.

Chap. 2^d

Of Uterine Hemorrhage subsequent to the expulsion of the placenta.

This I shall again divide into two kinds, 1st Hemorrhage from the Retention of the Placenta, and 2^d Hemorrhage which occurs after the placenta has been removed, in consequence of the want of contractile power in the uterus.

Sect. 1st

Of Hemorrhage from Retention of the Placenta.

In natural labour after the expulsion of the child, the uterus contracts, and separates the placenta and membranes, which always occasions a small discharge of blood; but if the contraction is regular the quantity lost is very trifling, and of no importance. If the contractions however, are partial or irregular, so as to detach ~~them~~ partially, and is not sufficiently strong to destroy the connection which subsists between ~~them~~ and the uterus, then hemorrhage must necessarily ensue, which will be more or less violent, in proportion to the number and diameter of the disengaged vessels, and to the power with which the circulation is carried on.

This species of hemorrhage is often a continuation of that which precedes delivery, and especially where the loss of blood has been so great as to induce great debility, thereby lessening the contractile power of the uterus. According to ~~the~~ hemorrhage will more especially appear, if the labour has been tedious

Chap. 2.
 The first thing I observed on the morning of the 1st of
 the 1st of August was 2. The morning was very
 clear and the sun was shining brightly. The wind was
 from the east and the sea was calm.

Chap. 3.
 The morning of the 2nd of August was very
 clear and the sun was shining brightly. The wind was
 from the east and the sea was calm.

+ James's Bay Vol. 2. p. 62
 The morning of the 3rd of August was very
 clear and the sun was shining brightly. The wind was
 from the east and the sea was calm.

29.

and the child at last expelled suddenly, by a strong but perhaps momentary effort. It would appear in these cases as if the uterus, wearied with repeated and unsuccessful attempts to expel the child, collects its whole power, and by one grand effort casts off the fetus and partially detaches the placenta, but is so completely exhausted by this exertion that it has not strength enough remaining to effect its own contractions. - The hemorrhage therefore appears very soon after delivery and before the placenta has come away. It is profuse and produces the usual effects of hemorrhage on the system, and these effects are greater, and more speedy than those which follow from hemorrhage before delivery, for the loss is instant and extensive. The first gush indeed does not produce great debility, because it consisted chiefly of blood which circulated in the uterus, and is not taken directly from the general system; and the separation of the placenta not being totally effected at once, the loss at first is more slow. But immediately after this the effect appears in all its danger; and it is not unusual for the woman if not assisted, to die within ten minutes after the birth of the child.* This statement shows very clearly the importance of the caution I have made in another place: never to perform delivery too precipitately, as it does not allow the uterus time to contract and adapt itself to its new situation. The progress of the child should be somewhat retarded in order to allow this effect to take place.

I do not conceive it to be necessary for me in this place to enter into a detail with regard to the time which the placenta may be left in the

utero without becoming injurious by its irritation, or by subjecting the patient to the danger of hemorrhage. It is sufficient for me to notice it after the hemorrhage has occurred in sufficient quantity to injure the patient unless it be checked.

We are not in those cases of hemorrhage which we are now considering to attempt to extract the placenta suddenly and forcibly, either by pulling at the cord, or by introducing the hand, and forcibly detaching it at once.

By the first method we should be very apt to produce inversion of the uterus, or to lacerate the cord; and by the second we should injure the uterus very considerably by the violence which would be necessary in order to effect it. The retention of the placenta is not necessary in order to effect it. The retention of the placenta is not the cause of the flooding, but it is a joint effect, arising from the same cause, namely, debility, or atony of the uterus, therefore simply detaching the placenta would not check the hemorrhage unless contractions were excited; on the contrary the flow ^{after} should be aggravated by increasing the number of the ruptured vessels. We are not to use harsh means to remove the placenta, but must endeavour to excite the uterus to contraction, and cause it to be thus separated.

For the purpose of removing the torpor of the uterus, we are to use frictions on the abdomen. These are to be made by rubbing the hand over this part for some time, at bandage applied pretty firmly around the abdomen with a view to the same end. Cold applications (in the manner already mentioned) are of

the first importance, but these shall be treated of more fully hereafter.

In order to facilitate the separation of the placenta, a finger must be passed along the cord which is to be gently pressed down, taking care not to invert the uterus, or rupture the cord, which last is of great importance as a guide to the placenta when we are obliged to introduce the hand. By this pressure on the cord alone we shall sometimes succeed, but if the tension of the uterus is very great, the hand must be introduced, and carried along the cord to the placenta. When it arrives here, the back of it should be rubbed gently against that viscus, and the uterus where it is implanted, which will commonly cause uterine contraction and cause both the hand and placenta to be expelled together.

Sometimes the adhesion of a part of the placenta is so strong, that the natural action of the uterus cannot detach it. Here the other parts of the connection being less firm, will be destroyed, and give rise to a profuse bleeding. In general these adhesions are not equally strict in all parts. For the most part only a few lobes, are thus identified, as it were, with the substance of the uterus; but there may be found at any part of the placenta. Upon all the placenta being detached except this indurated portion, the hemorrhage must be very considerable. In this state of things we must proceed to destroy these adhesions, and to bring away the placenta. The cord is to be wrapped in a dry cloth and pushed gently down; at the same time the fingers of the other hand

one to be passed up under the arch of the pubes, and pressed against the cord so as to make that rest over them, as on a pulley. This action should generally be in the direction of the axis of the superior strait, but must be varied according to the different situations of the placenta &c. When it becomes necessary to pass the hand into the uterus to bring away the placenta, the fingers are to be introduced along the cord, and passed between the uterus and placenta so as to receive the latter into the hollow of the hand; as little violence must be used in this operation as possible. As a portion of the placenta is always detached in cases of flooding, that part should be found and the separation commenced there. The uterus must always be fixed in one situation while we are operating by pressure on the abdomen made by an assistant. After the adhesions have been thus destroyed, the placenta is not to be hastily drawn away, but extracted slowly so as to allow the uterus time to contract.

Another state is what has been called the hour glass uterus, which is a contraction of the middle circular fibres of the uterus, so as to divide that body into two cavities, in the uppermost of which the placenta is contained. This state of the uterus is generally produced by hurrying the delivery of the child. When we introduce the finger to the os uteri shortly after the child is born, we do not feel the placenta; and if within half an hour we cannot perceive it, and especially if we feel the uterus forming an irregular tumour in the belly, we may apprehend the existence of stricture. If within an hour we

cannot feel any part of the placenta, our suspicions will be so far confirmed, as to warrant the introduction of the hand. We carry it along the cord, and will soon find that the placenta is not in the lower part of the uterus; following the cord we shall be directed to a small aperture through which the cord passes; and by introducing the finger into this we shall perceive the placenta lodged in a separate sac or cavity of the uterus*. When it has been discovered we must proceed immediately to dilate the stricture, in order to admit the placenta to pass through it. Passing the finger along the cord it must be gradually insinuated into the stricture; force is not to be used in doing this. By inserting first one finger and then another we shall be in a short time enabled to pass the hand into the cavity and to extract the placenta, which will often be found already detached; if not, it must be separated in the manner already detailed. The upper portion of the uterus must be excited to contract, before the hand is withdrawn, as the stricture would again form and subject the patient to the same danger to which she was before exposed. Should much difficulty be found in overcoming the stricture, throwing cold water on the abdomen will render the introduction of the hand much more easily accomplished.

We ought to be particularly on our guard against this state of the uterus for if the patient is already in a state of debility, from previous loss of blood, a sufficient quantity might be effused into the upper cavity to destroy the patient without being suspected.

If a portion of the placenta has been left behind in the uterus, in consequence of a laceration of its substance, the hand must be introduced, and if the piece can be felt, it must be detached, and brought away, but if it cannot readily be found we are not to persist in our attempts, as we might increase the hemorrhage by picking away the coagula which may have formed on the surfaces of the bleeding vessels.

Cruveilhier recommends in this case, plugging the vagina, and even the os uteri, to stop the blood, and excite uterine contractions. We may also inject some cold and astringent fluid for the same purpose, or throw a full stream of cold water into the uterus from a large syringe, by way of washing out the portion of placenta if it have become nearly detached. A gentle emetic also sometimes promotes the expulsion.*

In premature labours, the management of the placenta when retained is different from what has been laid down. Before the third month the fetus and its envelope generally come away together, but after that time the fetus comes first, leaving the after birth behind, as in natural labour. In general the uterus will contract readily and expel these, but sometimes this is not the case. We cannot manage the placenta here as we do at the full period of uterogestation, for the cord is so slender and weak that we cannot pull by that, as the slightest force would rupture it, and leave the placenta behind. ✕

of George Allen, 182

in Bantleloque

The difficulty of bringing away the placenta is in an inverse proportion to the time of pregnancy. Before the seventh month it is impossible to introduce the hand into the uterus, without great difficulty, and violence, in consequence of the rigidity of the external soft parts. When the flooding is moderate in quantity we may content ourselves with soliciting the action of the uterus, and endeavouring to make it contract with sufficient energy to finish the detachment, and complete the expulsion of the placenta.

But when the discharge of blood is very profuse, it requires much more energetic practice than this. If we cannot extract the placenta immediately, we must without delay stop up the passage, and hinder the blood from flowing, and by that means cause the formation of a coagulum, which by exactly filling the cavity of the uterus, may stop the mouths of the gaping vessels, and check the violence of the hemorrhage. For this purpose we may introduce a piece of sponge into the neck of the uterus; or if we can, a plug of very fine tow, or lint moistened with vinegar and water, with which the vagina may entirely be filled; we must take care to support this plug perfectly, till the uterus irritated by its presence, by that of the coagulum, and the afterbirth, contracts with sufficient force to deliver itself of them all. The abdomen must also be supported by means of a bandage pretty firmly applied.

The Terebinthine or Ergot, promises to be a very valuable remedy in this species of hemorrhage in consequence of the properties it possesses of exciting

[Faint, mostly illegible handwriting, likely bleed-through from the reverse side. The text appears to be organized into several paragraphs.]

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contractions of the uterus. Dr James mentions one case of flooding previous to delivery of the child, where the action of the uterus had ceased, in which he derived great benefit from this article. He gave twenty grains of the medicine, which speedily excited strong contractions, effected the delivery of the child, and put a stop to the hemorrhage.

Section 2^d

Of Hemorrhage which occurs after the Placenta has been removed.

The separation and exclusion of the placenta is always followed by a discharge of blood, which varies in quantity, in different women; in some it is very small, and in others very profuse so as suddenly to reduce the patient's strength very low, especially if there was much hemorrhage previous to the exclusion of the placenta. This hemorrhage may be caused by partial, or irregular contractions of the uterus, by atony, or by inversion of that organ. The latter sometimes gives rise to very troublesome discharges of blood, which will continue until the fundus is pushed up, and the uterus contracts. The longer the inversion continues, the more difficult will its management become. It will therefore be proper in all cases to ascertain whether the hemorrhage is a consequence of this affection; for if it exists and is not attended to, our attempts to relieve the woman will be ineffectual.

"It has often been a matter of great surprise to me," says Silliman,

" when I have seen a patient bear a sudden discharge of what seemed an enormous quantity of blood on the coming away of the placenta, without fainting, or shewing any signs of the common consequences of great loss of blood; but it may be explained in this manner. Should every drop of blood which circulates in the uterus be discharged in an instant, it would be of no immediate consequence to the patient, the very existence of the uterus not being necessary for her life. When all this blood is discharged, if the uterus should contract speedily, so that the vessels should be reduced to a small size, there would not be a continuance or return of the hemorrhage, and the patient would exhibit no signs of suffering from that which had already happened. But after the discharge of the blood contained in the vessels of the uterus, as before stated, if there should be no contraction of the uterus, then the vessels remaining of the same size, and the communication between the body and the uterus being preserved open as in pregnancy; the vessels of the uterus would be replenished from the constitution, and the same effect would be produced in the patient, as if it were really lost. Should this second quantity of blood supplied to the uterus, be discharged, and another be claimed from the constitution, then according to the quantity demanded, and the number of times the demand was made, would of course be the danger of the patient. In some cases the hemorrhage does not follow the extraction of the placenta immediately, but comes on after a certain time, and then it may

Benjamin vol 2. p 184.

he supposed, that the communication between the body and the uterus was closed, but not being confirmed was opened again by some effort too soon made, or more violent than the situation of the patient could endure."

The treatment of this species of flooding very nearly resembles the former, the indications of cure in both is, to excite uterine contractions, which by closing the open mouths of the vessels must necessarily stop the flow of blood. General irritations of the os uteri will of ten effect this; but it is proper at the same time to use all the auxiliary means, already recommended in the preceding species of hemorrhage. Cold applications will powerfully assist in producing this effect. Cloths dipped in cold water, or vinegar and water, may be placed on the pubes &c. as already directed; or the water may be dashed on the patient. Burns recommends in obstinate cases to throw it on with a syringe, this will much more certainly produce contractions than the simple application of the cold water. He also advises us to carry a sponge filled with ice-cold water into the uterus, "may 'sophe' ice itself has with happy effects been introduced into the womb." Stimulating injections thrown into the rectum will also sometimes be of great advantage.

A plug into the os uteri, will be of great service, but great care must be taken to prevent the effusion of blood from being so great as to endanger the life of the patient; this support to the uterus may be made by applying a bandage pretty firmly around the abdomen, and by compressing the u-

turns with the fingers. If this hemorrhage is suffered to go on in consequence of being unnoticed, or neglected, the debility of the patient increases until she is exhausted, her pulse becomes weak and quick, her countenance pale, extremities cold, her respiration is languid with sighing, she becomes restless, and gazes wildly around her, faintings supervene and finally death closes the scene. Sometimes the distension from this cause is enormous the size of the ovum stated to increase beyond what it was before delivery.

The bandage *re.* will prevent this great accumulation, and the plug by preventing the escape of the blood, will cause coagula to be formed on the surfaces of the bleeding vessels, and thus put a stop to the hemorrhage. These coagula are to be permitted to remain until they are thrown off by the actions of the uterus, when the woman will be free from further danger.

When the hemorrhage has greatly reduced the patient, cordial stimulants with a nourishing diet will be necessary; wine, *re.* are to be given in small quantities, and if let repeated for a considerable time, or until the strength is recruited, they must then be omitted or they will excite fever and inflammation of the uterus. The application of heat to the extremities will also powerfully assist the last named articles.

Opium has been highly extolled under these circumstances by Dr Hamilton and others. They would teach us to believe it improper, but the authorities in its favour are so very respectable, that under such circumstances there should be no hesitation.

in prescribing it. Burns says "they are among the safest, and best cordials we can employ, and ought in every instance to be exhibited. The dose ought to be proportioned to the emergency, varying from fifty to sixty drops of liquid Laudanum. In some instances when the debility was great, a hundred drops of the tincture, or five grains of solid opium, have been given at once, and afterwards three grains every hour, until the patient was out of danger. It does this practice," says he, "against which I was at first prejudiced from theory, ever prevent the contraction of the uterus, or produce afterwards any bad effect. Opiate supply the place of wine, and are infinitely safer." The efficacy of the opium would, I have no doubt, be greatly increased by the addition of the ^{excellent} lead and ipecacuanha as formerly mentioned.

The patient must in all these cases be placed in a horizontal posture, and kept in a state of absolute rest. This must be particularly enjoined, as the slightest motion, such as rising suddenly in bed, when the discharge has been very profuse will induce syncope, and even death.

I have now brought to a close this very imperfect essay; but I am persuaded that by a proper exhibition of the remedies mentioned, and paying a strict attention to the diet &c. of the patient during her convalescence, the disease alarming as it appears will seldom be a fatal one. But these remedies require great judgment in their application, and the most prompt, assiduous, and unswerving attention on the part of the practitioner. He should always

conceive that on him the life of his patient depends, and he should never for a moment absent himself from her unless impelled by necessity, until she is free from danger. By such conduct he will have the satisfaction of seeing persons restored to their families and friends, who but for him would have slept in the arms of death. Nothing can afford so much pleasure to the physician of sensibility, as the emanations of gratitude which arise from those persons, and the friends of those persons, whom he has rescued from diseases which would inevitably have destroyed them. And even should he not meet with this reward, he will always possess a consciousness of having performed a good action, which will amply compensate him, for all the fatigue and care he has undergone in the management of their diseases.

Having now brought to a conclusion this very imperfect Essay, I cannot take my leave of this University, without expressing to its Professors, as one of their pupils, the high sense I entertain, of the ability, and zeal with which they teach the healing art. Fostered by their guardianship, the science of medicine in the United States can never degenerate from the character it now holds, but must always approach nearer to perfection. Many of the evils of suffering humanity have been done away; but many still remain to be eradicated, and we have every reason to expect that the number will continually diminish, while the science continues to be cultivated with the spirit of inquiry and ardor of research which characterise this flourishing institution.

